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BARRICK

BARRICK RESOURCES (USA), INC.

DOGM
MINERALS PROGRAM
FILE COPY

December 6, 1991

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DIVISION OF
OIL GAS & MINING

Mr. Don A. Ostler, P.E.
Director
Division of Water Quality
Utah Department of Environmental Quality
Salt Lake City, Utah 84114-4870

Dear Mr. Ostler:

Subject: Reservation Canyon Tailings Impoundment

Barrick has received your letter dated November 27, 1991 concerning the reduction of cyanide concentration in our tailings impoundment material. Although we are in general agreement with the comments presented on pages 1 and 2 of the letter, we offer the following clarifications and suggested language changes:

- As noted in Section 1.0, page 3 of the submitted INCO report, the "objective of the program is to reduce the cyanide level to less than 10 mg/l (10 ppm) from present levels of approximately 60 ppm--a reduction greater than 80%." Also noted on page 16, Section 4.0, paragraph 2, sentence 2, the ability of the system design to achieve a cyanide concentration of less than 10 mg/l CN_{TTL} is a **PERFORMANCE GOAL** rather than a **PERFORMANCE LEVEL**.
- The ability to achieve CN_{WAD} values of less than 1 ppm was noted on page 19, Section 4.4.1 but was clearly cautioned by underlining the words *on a laboratory scale*. No results were drawn that a CN_{TTL} value of 1 ppm or less could be achieved in either the full-scale or laboratory plant. Such a determination of economic and technical feasibility can only be accomplished with a full-scale system.
- With regards to your comment No. 3 on page 1 of your letter, Barrick agrees that it is our **intent** to reduce the CN_{TTL} value to below 1 ppm. This intent, or goal, is not to be confused with the economic and technical realities that will be generated by the full-scale study. Barrick has consis-

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tently maintained the position with the DWQ that any reduction in cyanide concentration is an environmentally positive step towards the mitigation of further groundwater quality degradation, and the lowest level technically and economically achievable is our goal.

- With regards to your comment No. 4, page 1 of your letter, Barrick continues to be confident that a 10 ppm CN_{TTL} value can be consistently and economically achieved with the full-scale detoxification system. We also concur with your statement that 1.0 mg/l is an operational goal.

In light of the above noted clarifications, we offer the following language changes to your stated Conditions 1 through 3 on page 2 of your November 27, 1991 letter:

1. All necessary effort will be expended by Barrick to determine the economic and technical feasibility of achieving a monthly average cyanide (total) concentration of 1.0 ppm or less in the tailings effluent during the one-year, full-scale test program.
2. All necessary chemical dosages will be applied and operational controls exercised by Barrick to determine the feasibility of achieving the 1.0 ppm cyanide total monthly average goal as per (1) above. Probable excursions from the 1.0 ppm goal are recognized, and allowances in the averaging calculations will be made during the testing to preclude unforeseen or unplanned system upsets, equipment failures, or test implementation protocols.
3. All necessary measures will be undertaken to prevent the detoxified tailings effluent cyanide (total) concentrations from exceeding the 10 ppm level.
4. Barrick agrees with a quarterly review of the testing program and encourages the DWQ to maintain an active involvement in the test work.

We believe these proposed language modifications do not in any way diminish the viability of the detoxification testing program or, more importantly, the long-term environmental benefit of detoxi-

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fication. Please contact me should you have any questions on our proposed language modifications.

Sincerely,



Frank D. Wicks
Vice President and General Manager

FDW/cg

cc: G. M. Eurick
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